

holes. The copper plate 51 having through holes 59 is shown in FIGS. 11A to 11C. Through holes 59 are formed instead of the dimples 53 of FIGS. 4A and 4B.

IN THE CLAIMS:

Please cancel claims 18-20 without prejudice or disclaimer.

Please enter the following amended claims:

1. (Amended) A semiconductor device comprising:

a semiconductor chip having a plurality of electrodes;

wiring materials having a plurality of lead terminals elongated in a first direction;

a metal plate having a first main surface and a second main surface opposed to said first main surface, wherein said metal plate is joined to said plurality of electrodes at a first end portion of said first main surface and is joined to said plurality of lead terminals at a second end portion of said first main surface facing to said first end portion to connect said plurality of electrodes and said plurality of lead terminals; and

a molding resin sealing said semiconductor chip, parts of said wiring materials, and said metal plate, wherein

said second main surface of said metal plate is roughened, said second main surface having a plurality of recesses filled with said molding resin.

2. (Amended) The semiconductor device as claimed in claim 1, wherein said metal plate connects with said plurality of electrodes and said plurality of lead terminals by a plating formed on said first main surface.



3. (Amended) The semiconductor device as claimed in claim 2, wherein said metal plate has at least one bent part elongated in a second direction crossing said first direction between said first end portion and said second end portion, and

wherein said plating is formed on said first end portion and said second end portion.

4. (Amended) A semiconductor device comprising:

a semiconductor chip having a plurality of electrodes;

wiring materials having a plurality of lead terminals;

a metal plate connecting with said plurality of electrodes at a first portion of said metal plate and connecting with said plurality of lead terminals at a second portion of said metal plate;

a molding resin sealing said semiconductor chip, parts of said wiring materials, and said metal plate, wherein

a surface of said metal plate is uneven and joined to said molding resin;

wherein said metal plate connects with said plurality of electrodes and said plurality of lead terminals by a plating formed on said metal plate;

wherein said metal plate has at least one bent part between said first portion and said second portion; and

wherein said plating is formed only on said first portion and said second portion.



8. (Amended) The semiconductor device as claimed in claim 3, wherein said plurality of lead terminals have a stepped part, and

wherein said metal plate are connected with said stepped part by a conductive bonding material.

- 9. (Amended) The semiconductor device as claimed in claim 8, wherein said roughened second main surface of said metal plate is a sand blasted surface.
- 10. (Amended) The semiconductor device as claimed in claim 8, wherein said second main surface of said metal plate is dimpled.

12. (Amended) A semiconductor device comprising:



a semiconductor chip having a plurality of electrodes;

wiring materials having a plurality of lead terminals;

a metal plate connecting with said plurality of electrodes at a first portion of said metal plate and connecting with said plurality of lead terminals at a second portion of said metal plate;

a molding resin sealing said semiconductor chip, parts of said wiring materials, and said metal plate, wherein

a surface of said metal plate is uneven and joined to said molding resin; wherein said plurality of lead terminals have a stepped part; and

Amendment Under 37 C.F.R. § 1.111 Application No. 09/941,744

wherein said metal plate is connected with said stepped part by a conductive bonding material; and

wherein said surface of said metal plate has a plurality of whisker platings.

- 13. (Amended) The semiconductor device as claimed in claim 3, wherein said metal plate has claw parts being extended from an edge part of said metal plate and being fitted in intervals of two of said wiring materials.
- 14. (Amended) The semiconductor device as claimed in claim 13, wherein said roughened second main surface of said metal plate is a sand blasted surface.
- 15. (Amended) The semiconductor device as claimed in claim 13, wherein said second main surface of said metal plate is dimpled.
 - 17. (Amended) A semiconductor device comprising:

a semiconductor chip having a plurality of electrodes;

wiring materials having a plurality of lead terminals;

a metal plate connecting with said plurality of electrodes at a first portion of said metal plate and connecting with said plurality of lead terminals at a second portion of said metal plate;

a molding resin sealing said semiconductor chip, parts of said wiring materials, and said metal plate, wherein

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a surface of said metal plate is uneven and joined to said molding resin; wherein said metal plate has claw parts fitted in said wiring materials; and wherein said surface of said metal plate has a plurality of whisker platings.

Please add the following new claims:



- 21. (New) The semiconductor device as claimed in claim 8, wherein said roughened second main surface of said metal plate is a chemical polished surface.
- 22. (New) The semiconductor device as claimed in claim 13, wherein said roughened second main surface of said metal plate is a chemical polished surface.
 - 23. (New) The semiconductor device, comprising:
 - a semiconductor chip having at least one electrode;
 - a lead terminal arranged at a distance from said semiconductor chip;
- a metal plate connected at a first end portion thereof to said at least one electrode of said semiconductor chip and at a second end portion thereof to said lead terminal; and
- a molding resin encapsulating said semiconductor chip, said lead terminal and said metal plate;

said metal plate having a surface which is subject to such a treatment that enhances adhesion strength between said metal plate and said molding plate.



- 24. (New) The device as claimed in claim 23, wherein said surface of said metal plate is roughened to enhance the adhesion strength between said metal plate and said molding plate.
- 25. (New) The device as claimed in claim 23, wherein said surface of said metal plate is dimpled to enhance the adhesion strength between said metal plate and said molding plate.
- 26. (New) The device as claimed in claim 23, wherein a plurality of through holes are provided in said metal plate to enhance the adhesion strength between said metal plate and said molding plate.
- 27. (New) The device as claimed in claim 23, wherein said surface of said metal plate is subject to whicker plating to enhance the adhesion strength between said metal plate and said molding plate.